

美南國建協進會
The Association of Chinese American Professionals

二零二四年科學工程技術研討會

2024

Annual Conference of
Science, Engineering and Technology Seminars (SETS)

大會議程 Program

THEME:

Environmental Protection, Health, Nano and Composite Technology,
Young Professionals Networking, AI, Business, Energy, Popular Science

會議主題:

環境保護、健康、奈米及複合科技、青年專業人士交流講座、人工智慧、商務、能源、科普

Saturday, June 1, 2024

Sugar Land Marriott
16090 City Walk, Sugar Land, Texas



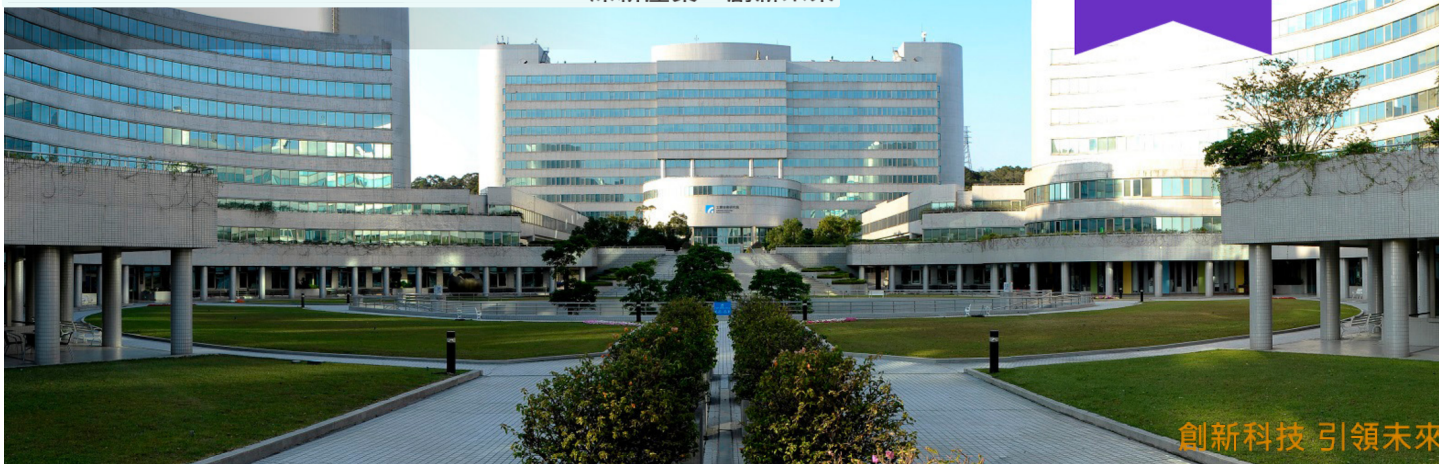
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ACAP



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2024

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創新科技 引領未來

INNOVATING
A BETTER FUTURE

2030 Technology Strategy and Roadmap

To innovate a better future, ITRI has drawn up its 2030 Technology Strategy and Roadmap, in which it enhances the development of intelligentization enabling technologies and focuses on three application domains: Smart Living, Quality Health, and Sustainable Environment. The Institute strives to use technological innovation to shape new lifestyles, develop market-oriented solutions, and find uncontested spaces.

Smart Living

Digital transformation has become a driving force for global economic innovation. With the prevalence of IoT and AI, people are seeking a faster, easier, and smarter life with the introduction of intelligent devices/services and new business models. Therefore ITRI is developing personalized devices and services, autonomous mobility systems, and smart industries and services for the Smart Living domain. ITRI is also working on human-machine interaction, enhanced imaging and perception systems, autonomous decision-making and control, and smart business technologies and services.

Quality Health

As many countries are moving towards hyper-aged societies, demands for medical personnel and healthcare resources are increasing. New business opportunities in the emerging diagnosis and treatment market are also created through integrated solutions that include smart long-term care systems, personalized/precision medicine, and healthcare models. In the domain of Quality Health, ITRI leverages Taiwan's strengths in ICT and medical care systems to develop smart medical and healthcare technologies. The R&D scope includes smart medical electronics, regenerative medicine, wearable devices, digital healthcare services, and many more.

Sustainable Environment

Due to the current climate change, greenhouse effects, and limited energy sources and resources, how to coexist with Mother Nature has become an important issue when developing new technologies. A sustainable environment can be maintained by creating a circular ecosystem, cutting down time and energy consuming production processes, and discovering green energy sources. ITRI is thereby enhancing the technology development in the circular economy, smart manufacturing, and green energy and environment fields by exploring high-value circular materials, smart manufacturing systems, and supply chain management to achieve ecological symbiosis.

Intelligentization Enabling Technology

Intelligentization enabling technology is the backbone supporting multiple applications in the 2030 Technology Strategy and Roadmap. As a result, ITRI turns to AI, semiconductor, communications, cybersecurity, and cloud technologies to foster technology breakthrough in the above three application domains. At the same time, Intelligentization enabling technology can ensure data privacy and information safety when combating cyber threats.

ITRI International Inc. (a subsidiary of ITRI) San Jose, CA, USA. Web: www.itri.org.tw Email: info@itri.com

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A Welcome Message from ACAP President



The Association of Chinese American Professional (ACAP, 美南國建會) and the conference organizing committee are pleased to welcome you to our annual Science, Engineering and Technology Seminars (SETS, 科學工程技術研討會). For over 45 years, ACAP has hosted a venue for Taiwanese professionals across all Science, Technology, and Engineering backgrounds to gather to encourage professional advancement and personal development through the multidisciplinary SETS conference and other events. SETS has provided and continues to provide an opportunity for professionals of Taiwanese heritage from various backgrounds, encompassing not only the STEM fields, but also business, accounting, law, and more over the years, to share and celebrate our collective achievements and to continue to maintain and build our community. More than ever, it is imperative that we broaden our circle to include those who may be less familiar with our community and invite the world to join us as we demonstrate what we can do.

This year's program highlights Generative Artificial Intelligence, and together, we will explore the perspectives, challenges, and opportunities for this exciting new technology. As such, we are honored to welcome Dr. Da-Jeng Yao, PhD (饒達仁博士), General Director of the Mechanical and Mechatronics Systems Laboratories at the Industrial Technology Research Institute (ITRI, 工業技術研究院) as our keynote speaker. Dr. Yao is renowned and well respected in his field, and we look forward to his talk on the next generation of intelligent manufacturing factories.

SETS would not be possible without the generous support of the Taipei Economic & Cultural Office (駐休士頓台北經濟文化辦事處) under Director Yvonne Hsiao (蕭伊芳) and the National Science and Technology Council (國家科學及技術委員會) in conjunction with the Science and Technology Division of the Taipei Economic and Cultural Office (駐休士頓台北經濟文化辦事處科技組) under Director Pin-Chuan Chen (陳品銓) as well as our sponsors and supporters. We are extremely privileged to receive support from the sponsoring companies and entities, our partner organizations, and the Houston community, and we offer our deepest gratitude for their continuing support and belief in our mission.

Finally, I would like to recognize and express my most sincere thanks to former ACAP presidents Daniel Chen (陳皇序), Dr. Stephen Huang (黃壽萱), Dr. Frank Lin (林國強), Paul Liou (劉志忠), and Betty Tung (閻寶印) for their guidance and support throughout the year as well as President Elect Eddy Lee and other officers for their continual support to this and other ACAP events throughout the year. We also extend our appreciation and congratulations to Cecil Fong (方宏泰) and Daniel Chen (陳皇序) for their leadership in the successful planning and execution of this year's Diversity Summit.

We are excited to present this year's program, including two new sessions focused on strengthening the ties of our community. We hope that you enjoy the program and thank you for your support!

Sincerely,

Minnie Tsai Nelson

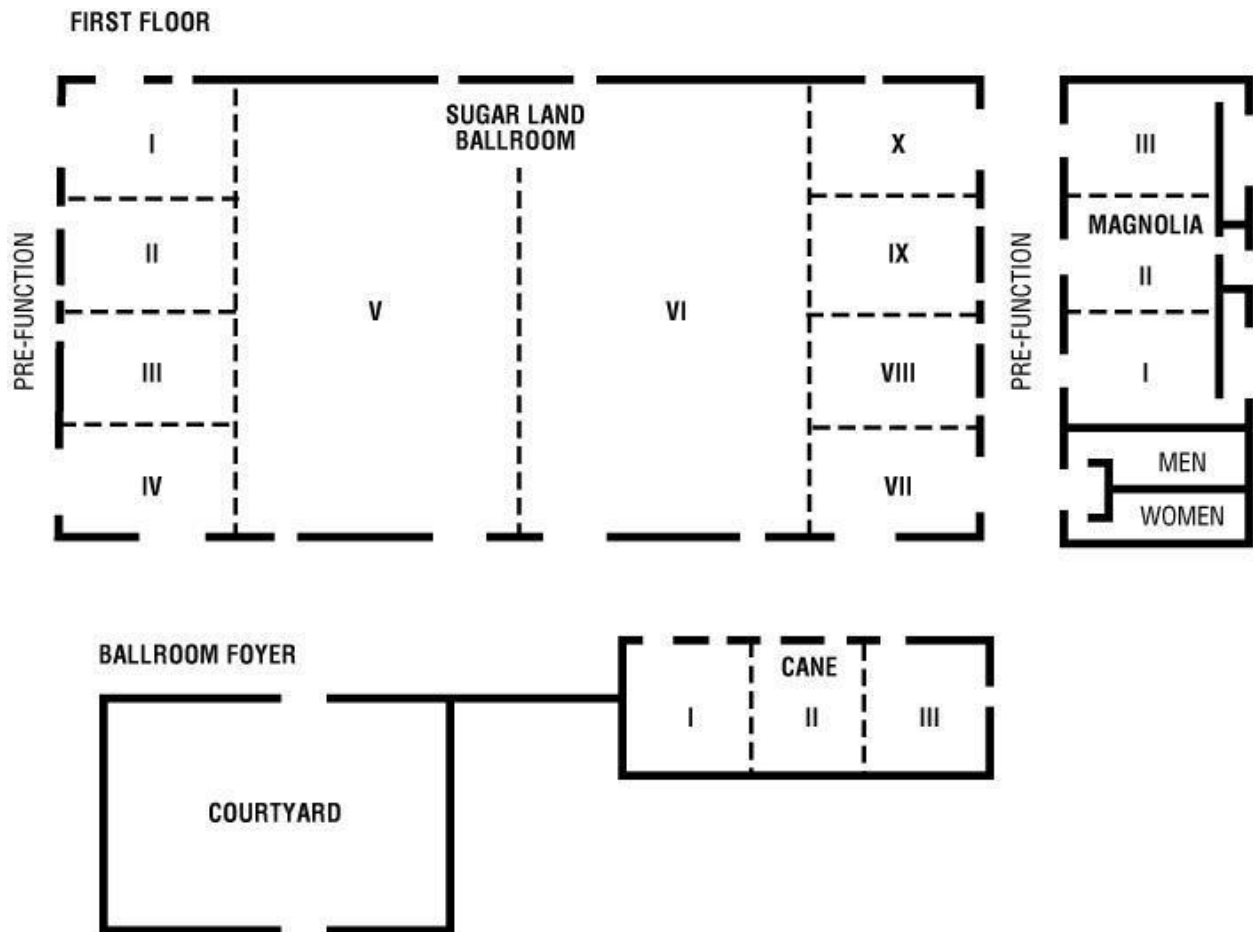
ACAP President 2023-2024

二零二四年科學工程技術研討會
2024 Science, Engineering and Technology Seminars (SETS)
Program-at-a-Glance

Time	Program	Room
7:30 am – 9:00 am	Speakers and Chairs Breakfast	Cane I
7:30 am – 2:30 pm	Registration	Ballroom Foyer
Morning Concurrent Sessions		
8:00 am – 11:30 am	Environmental Protection Session (環境保護講座)	Ballroom IX
8:00 am – 11:30 am	Nano and Composite Technology Session (奈米及複合科技講座)	Ballroom X
8:30 am – 11:30 am	Health Session (健康講座)	Ballroom III-IV
9:30 am – 11:30 am	Young Professionals Networking Session (青年專業人士交流講座) Joint Chinese College Alumni Association of Southern USA (JCCAA) 美南大專院校聯合校友會協辦	Ballroom VII-VIII
Lunch Session		
11:30 am – 12:30 pm	Luncheon (午餐)	Ballroom V-VI
12:30 pm – 1:30 pm	Keynote Address (專題演講)	
Afternoon Concurrent Sessions		
1:30 pm – 4:00 pm	Artificial Intelligence Session (人工智慧講座) 休士頓華商經貿聯合會(FCTAGH)協辦	Ballroom III-IV
1:30 pm – 4:00 pm	Popular Science Session (科普) Formosa Association of Student Cultural Ambassadors (FASCA) 海外青年文化大使協辦 Science and Technology Division, Taipei Economic and Cultural Office in Houston 經文處科技組協辦	Ballroom IX
1:30 pm – 4:30 pm	Energy Session (能源講座) 美國華人石油協會(CAPA)協辦	Ballroom VII-VIII
1:30 pm – 4:30 pm	Business Management Session (商業管理講座) 世界華人工商婦女企管協會美南分會(GFCBW)協辦	Ballroom X

二零二四年科學工程技術研討會
2024 Science, Engineering and Technology Seminars (SETS)

Sugar Land Marriott Floor Plan



Session Schedule

Time	Session	Room
8:00 am – 11:30 am	<i>Environmental Protection Session</i> (環境保護講座)	Ballroom IX
Chair	Edward T. Chen (陳天生) , President, Chinese American Society of Environmental Protection & Safety, Houston, Texas	
Speakers	Yin-Jen Chou (卓英仁) , PhD, Technical Director, Greenland Environmental Company, Taiwan Cheng-Mao Tseng (曾正茂) , PhD, Deputy General Manager, Greenland Environmental Company, Taiwan	
Topic	A Case Study on Small Molecule Organic Fertilizer Made from Food Waste (廚餘製小分子有機肥案例研究)	
Speakers	Matthew Lee (李建宏律師) , LexNovia Venture Studio Sam Chen (陳勝亭董事長) , Texas Village Austin, Ltd., Austin, Texas Shih-Jen Andy Wang (王世任) , MD, President & CEO, Asaharu Group, Taipei, Taiwan	
Topic	N9 Spaces - Sustainable Hospitality for Digital Nomads (N9空間-諾馬客社群平台與環保節能減碳新機制)	
Speaker	Vance Nobe , CEO, Akari Energy, Houston, Texas	
Topic	The Challenges of Developing Large-Scale Solar Power	
Speakers	Chi-Chung Chang (張濟群博士) , PhD, Principal, CPD Consultants; Adjunct Faculty, University of Houston, Houston, Texas Jonathan Greene , PE, CPD Consultants, Houston, Texas	
Topic	Green Building Design and Construction in Response to the Global Weather	
Speaker	Doug Coenen , PE, ENV SP, Walter P. Moore Engineering, Houston, Texas	
Topic	Engineering Design for Flood Protection in the Greater Houston Area	
Speaker	Keith Koski , MArch, Manager of Recycling and Reuse Warehouse, Solid Waste Management Department, City of Houston	
Topic	City of Houston Reuse Warehouse for Building Materials - A Innovative Program at 15 Years	
Speaker	Clifford C. Lee (黎靖宇博士) , PhD, Lee Plastics Consulting, Pearland, Texas	
Topic	Technology Frontiers and Sustainability Development of Polyethylene - the Largest Volume Plastic Material in the world	
Speaker	Michael Liu , President, American P&G Corp, Houston, Texas	
Topic	Environmentally Friendly and Biodegradable Starch Glue Adhesive	

8:00 am – 11:30 am	<i>Nano and Composite Technology Session</i> (奈米及複合科技講座)	Ballroom X
Co-Chairs	Howard Paul (浦浩德博士), PhD, PE, Engineering Manager, America P&G Guoqiang Li (李國強博士), PhD, Professor, Louisiana State University (LSU)	
Speaker	Howard Paul (浦浩德博士), PhD, PE, Engineering Manager, America P&G, Houston, Texas	
Topic	Nanotechnology New Blast-proof Materials (納米科技的新防爆材料)	
Speaker	Guoqiang Li (李國強博士), PhD, Professor, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, Louisiana	
Topic	Multifunctional Syntactic Foam (多功能的複合泡沫)	
Speaker	Cheng Yan (嚴成博士), PhD, Department of Mechanical Engineering, Southern University, Baton Rouge, LA	
Topic	Enhancing Shape Memory Vitrimers with Machine Learning: A Path to High-Performance Materials (透過機器學習增強形狀記憶的 Vitrimers：高性能材料之路)	
Speakers	Chengbin Yu (俞程斌博士), PhD, Postdoctoral Researcher, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA Guoqiang Li (李國強博士), PhD, Professor, Louisiana State University, Baton Rouge, LA	
Topic	Electric Power Generation by Connecting Two Form-Stable Phase Change Materials (PCMs) (透過連接兩種形狀穩定的相變材料 (PCMs) 來發電)	
Speakers	Xiaowei Mu, PhD, Postdoctoral Researcher, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA Guoqiang Li (李國強博士), PhD, Professor, Louisiana State University, Baton Rouge, LA	
Topic	Plasma Modification Interfaces in Nonflammable Ceramic Nanofiber-Polymer Electrolytes with High-Ionic Conductivity for Lithium Metal Batteries (用於鋰電池具有高離子電導率的電漿界面在不可燃陶瓷奈米纖維聚合物電解質)	
8:30 am – 11:30 am	<i>Health Session (健康講座):</i> Materials in Dentistry (牙科材料知多少)	Ballroom III-IV
Chair	Hue-Teh Shih (施惠德醫師), MD, MPH, Cardiac Electrophysiology	
Speaker	Michael Ming-Ying Chiang (江明穎), BDS, MS, Brilliant Smiles Orthodontics	
Topic	Materials in Orthodontics (Virtual Presentation)	
Speaker	Hsiu-Wan Meng (蒙秀婉), DDS, MS, Blackhorse Periodontics and Implant Dentistry	
Topic	Materials in Periodontics and Dental Implant	
Speaker	Jennifer Kan (關若玫), DDS, Fountains Family Dental	
Topic	Materials in Root Canal, Crowns, Bridges, and Dentures	

9:30 am – 11:30 am	<i>Young Professionals Networking Session</i> (青年專業人士交流講座) Joint Chinese College Alumni Association of Southern USA (JCCAA) 美南大專院校聯合校友會 協辦	Ballroom VII-VIII
Chair	Amy Ku (辜千慈博士), PhD, Scientist, Baylor College of Medicine Pei-Ching Tai (戴珮青博士), PhD, JCCAA President	
Speakers	JoAnne Ray (芮久孜), Director of Community Engagement, Office of the City Controller, City of Houston Kathy Cheng (鄭佩玲), JD, Attorney	
Topic	Career Insights Mixer (職場停看聽)	
1:30 pm – 4:00 pm	<i>Artificial Intelligence Session</i> (人工智慧講座) Federation of Chinese Traders Alumni Greater Houston (FCTAGH) 休士頓華商經貿聯合會協辦	Ballroom III-IV
Chair	Stephen Huang (黃壽萱教授), PhD, Professor, University of Houston, Houston, Texas	
Speaker	Stephen Huang (黃壽萱教授), PhD, Professor, University of Houston, Houston, Texas	
Topic	Generative AI: Perspectives, Challenges, and Opportunities (生成式人工智慧的前瞻、挑戰及機會)	
Speaker	Kang-Lin Hsieh (謝岡霖博士), PhD, Post-Doctoral Fellow, MD Anderson Cancer Center	
Topic	Digital Biology: How AI Transforms the Landscape of Biology and Shapes Future Opportunities (AI 如何改變生物學以及形塑未來的機會)	
Speaker	Chien-Pu Huang (黃千溥建築師/博士候選人), PhD candidate, National Taiwan University, Taipei, Taiwan	
Topic	Carbon Neutrality in the Built Environment: A Dream or Reality? (建成環境中的碳中和：夢想還是現實?)	
1:30 pm – 4:00 pm	<i>Popular Science Session (科普)</i> Formosa Association of Student Cultural Ambassadors (FASCA) 海外青年文化大使協辦 Science and Technology Division, Taipei Economic and Cultural Office in Houston 經文處科技組協辦	Ballroom IX
Co-Chairs	Pei-Ching Tai (戴珮青博士), PhD, FASCA Advisor Peggy Chiu (邱佩冠), FASCA Advisor	
Speaker	Pin-Chuan (PC) Chen (陳品銓教授), PhD, Director, Science and Technology Division, Taipei Economic and Cultural Office in Houston	
Topic	Science and Technology Promotion in Taiwan	

Speaker	San-Pei Lee (李姍蓓) , Life Science Teacher (IB Environmental Systems & Aquatic Science), Lamar High School (Houston ISD)	
Topic	Teaching Intersectional Environmentalism: Protecting People + Planet	
Speaker	Hongyan Li , MD, PhD, Biology Teacher, DeBakey High School	
Topic	Forensic Science	
1:30 pm – 4:30 pm	Energy Session (能源講座): AI and Machine Learning in Oil Field & New Energies Chinese American Petroleum Association (CAPA) 美國華人石油協會協辦	Ballroom VII-VIII
Co-Chairs	Chih-Cheng Lin (林志成) , Senior Production Engineer, SME – Sand Control, Shell Oil Company Tzu-hao Yeh (葉子豪博士) , PhD, Reservoir Engineer, Shell International E&P	
Speaker	Frank Frey , Principal Energy Services, GHD	
Topic	Achieving Net Zero – The Limits of Electrification	
Speaker	Chuen Song Chen , PhD, Data Scientist, Shell Global Solutions (US) Inc.	
Topic	Subsurface Image Morphing Operator using Deep Learning Techniques	
Speaker	Zach Liu , PE, PG, CFA, Subsurface Director CCUS, Harvestone Low Carbon Partners	
Topic	Challenges and Opportunities in Large-Scale Carbon Capture Storage (CCS)	
Speaker	Xuejia Du , PhD, Postdoctoral Fellow, University of Houston	
Topic	Applying Machine Learning Algorithms to Predict CO2 Solubility in Oil during CO2 Flooding	
1:30 pm – 4:30 pm	Business Session (商務講座) Global Federation of Chinese Business Women in Southern USA (GFCBW) 世界華人工商婦女企管協會美南分會協辦	Ballroom X
Chair	Annie Hwang (張瓊文) , President, GFCBW	
Speaker	Alex Shaw (蕭雲祥) , MBA, Investment Consultant	
Topic	How to Establish a Complete Retirement Financial Plan (如何建立一個完整的退休計劃)	
Speaker	Kenneth Li (李雄) , Broker, CCIM, CIPS, President, Southwest Realty Group; Chairman, Southwest Management District; Commissioner of Houston Housing Authority	
Topic	How to Do Business with the Houston Housing Authority	

Honorable Guest



Yvonne Hsiao (蕭伊芳處長)

Director General, Taipei Economic and Cultural Office in Houston

駐休士頓台北經濟文化辦事處

Education

BA in Foreign Languages and Literature, National Taiwan University

Experience

- Deputy Director General, Department of International Cooperation and Economic Affairs, MOFA (2023.02- 2023.07)
- Deputy Director General, Department of International Organizations, MOFA (2020.08-2023.02)
- Chief Secretary, Institute of Diplomacy and International Affairs, MOFA (2020.01- 2020.08)
- Deputy Counselor on Home Assignment, Department of International Organizations, MOFA (2019.07- 2019.12)
- Director/ Deputy Executive Director, Taipei Economic and Cultural Office in Australia (2013-2019)
- Section Chief, Division of Document Authentication, Bureau of Consular Affairs, MOFA (2010-2013)
- Second Secretary on Home Assignment, Department of East Asian and Pacific Affairs, MOFA (2009-2010)
- Secretary, Taipei Economic and Cultural Office in New York (2004-2009)
- Desk Officer, Ministry of Foreign Affairs, Republic of China (2000-2004)

Keynote Speaker



Da-Jeng Yao, PhD (饒達仁博士)

General Director, Mechanical and Mechatronics Systems Laboratories
Industrial Technology Research Institute (ITRI)
(工業技術研究院 機械與機電系統研究所所長)

Education

2001 PhD, Mechanical and Aerospace Engineering
University of California at Los Angeles (UCLA), USA

Expertise

Smart manufacturing including robotics, intelligent factory, and advance green process and equipment development; Intelligent mobility including autonomous and electric vehicle, UAV and drone; BioMEMS and Microfluidics, and Digital Microfluidics System (EWOD)

Experience

2022-Present General Director, Mechanical and Mechatronics Systems Lab (MMSL), ITRI
2021-Present Convener, Decarbonization Energy Work Circle Hydrogen Energy Technology
Evaluation Group, Net Zero Emission Path Project Working Group, Executive
Yuan
2020-2021 Convener of Engineering, Green Energy Technology Joint Research and
Development Plan to Save Energy, Foresight Division, Ministry of Science and
Technology

Honors

2024 Chinese Institute of Engineer, Outstanding Professor Award
2021 Chinese Society of Mechanical Engineers, Outstanding Engineering Professor Award
2020 Ministry of Science and Technology, Outstanding Research Award
2014 & 2020 IEEE NANOMED Conference Chair
2012 & 2014 National Innovation Award
2009 NSC Ta-You Wu Memorial Award (MOST) Award

Abstracts and Session Speakers Information

8:00 a.m. – 11:30 am. *Environmental Protection Session (環境保護講座)*

Chair: Edward T. Chen (陳天生), President, Chinese American Society of Environmental Protection & Safety, Houston, Texas

Speakers: Yin-Jen Chou (卓英仁), PhD, Technical Director, Greenland Environmental Company, Taiwan
 Cheng-Mao Tseng (曾正茂), PhD, Deputy General Manager, Greenland Environmental Company, Taiwan

Topic: A Case Study on Small Molecule Organic Fertilizer Made from Food Waste (廚餘製小分子有機肥案例研究)

Abstract: Taiwan produces about 1.35 million metric tons of food waste every year, causing stench and environmental pollution. The government frequently comes up with good strategies to deal with it, but the results are ineffective. We will discuss the various methods that have been tried (Compost Fermentation, waste biogas-generated electricity, and chemical hydrolysis) and why the first two have been discarded.

The last method uses chemical hydrolysis to deal with greasy and greasy cooked food waste, which has become an excellent choice. This treatment method has been successfully commercialized in Guilin City, China, processing 30 tons of food waste per day. The whole factory has no stench and is cleaner than an average food factory. Another production line will soon be set up in Taiwan later this year.

Our approach (chemical hydrolysis) can utilize food waste to small molecule organic fertilizers. Because the molecules are nanosized, it has the advantage of rapid absorption of chemical fertilizers. There is no phenomenon of chemical fertilizers acidifying the soil and soil caking. After application, the fruits and vegetables planted in the soil become bigger, the harvesting yield increases, and they resist pests and diseases better. Capacity is strengthened, and the amount of pesticides used is significantly reduced, which greatly benefits human health.

About the Speakers: 卓英仁(Ying-Jen Chou)博士為美國佛羅里達大學環境工程碩士，北京中國政法大學國際環境法學博士。目前任職環基環保集團技術總監。於任職行政院環保署期間，曾推動台灣地區之「廢棄物管制計畫」和「資源回收計畫」。而任職環基公司期間，除設計和監造全台超過 30 座掩埋場，也曾擔任多項中央或地方環保主管機關廢棄物管理相關之執行計畫。

曾正茂(Cheng-Mao Tseng)博士，為中國文化大學環境設計學院建築及都市計畫研究所工學博士，目前任職環基環保集團顧問，純萃生技股份有限公司董事，美國德州健康科學大學國際交流顧問。曾任職行政院環保署簡任主管，美國德州農工大學 訪問學者，美國傅爾佈萊特 環境保護專業人員 獎助學人，社團法人台灣社會改造協會秘書長及環球科技大學環境資源管理系主任兼所長。以30多年在行政院環保署及學術界、產業界的專業訓練，努力成為一位默默奉獻的綠色產業志願者，將環保作為自己畢生努力的目標。

Speakers: Matthew Lee (李建宏律師), LexNovia Venture Studio
Sam Chen (陳勝亭董事長), Texas Village Austin, Ltd., Austin, Texas
Shih-Jen Andy Wang (王世任), MD, President & CEO, Asaharu Group, Taipei, Taiwan
Topic: N9 Spaces - Sustainable Hospitality for Digital Nomads (N9空間-諾馬客社群平台
與環保節能減碳新機制)

Abstract: The digital nomad lifestyle, characterized by remote work and a nomadic existence, has surged in popularity in recent years. This trend is expected to continue growing, with estimates suggesting that by 2035, up to 60% of the workforce could be working remotely, a great number of those will want to pursue the nomadic lifestyle.

Remote work has the potential to significantly reduce carbon emissions associated with commuting and office buildings, with the potential to reduce greenhouse gas emissions by 54 million tons annually, equivalent to taking 10 million cars off the road. However, the digital nomad lifestyle enabled by remote work also presents new challenges, particularly in terms of sustainability. Air travel, in particular, is a major contributor to carbon emissions.

N9 Spaces proposes a solution to this challenge by localizing the nomadic lifestyle. Taiwan, with its diverse natural resources including mountains, forests, ocean, beaches, urban, and rural sceneries, as well as modern telecommunication and public transportation infrastructure, is ideally positioned to provide such hubs. By creating hubs where digital nomads can enjoy the full benefits of remote work while exploring life enrichment activities in a sustainable way, N9 Spaces aims to reduce the environmental impact of travel and foster a sense of community among digital nomads.

Through its innovative approach to sustainable hospitality, N9 Spaces demonstrates that the digital nomad lifestyle can be pursued in a way that is environmentally responsible and socially beneficial. As the number of digital nomads continues to grow, it is imperative that we find sustainable solutions to accommodate this lifestyle, and N9 Spaces is leveraging Taiwan's unique position to lead the way in this endeavor.

About the Speakers: 李建弘 (Matthew Lee) 博士為創律工坊創辦人以及執行合夥人。李博士是少數兼具科學、法律、與商業專才於一身的專業人士。在取得生化博士後李博士轉入知識產權與新創投資領域，先後曾任職於美國專利局，美國前十大律師事務所執業律師，以及數家新創公司的副總以及共同創辦人。近年來李博士透過他所創辦的創意工作室 LexNovia Venture Studio (創律工坊) 在台灣推廣創意工作室這個新型的新創打造模式並協助台灣新創與美國市場接軌。

陳勝亭董事長 (Sam Chen) 是旅館營造與管理業的資深專業人士，具有五十多年的旅館營造與經營經驗。陳先生目前為美國奧斯汀 Casulo 旅館的董事長，也是 N9 Spaces 在美國發展的主要合作夥伴。奧斯汀目前是全美排第一的諾馬客聚落。陳董將與 N9 Spaces 合作，一起將 Casulo 改造成一個專門符合諾馬客需求，又能維持永續經營原則的 N9 Spaces 示範點。

王世任 (Andy Wang) 博士為漢方生技與藥食同源專家，也是地理風水與易學大師，師承

臺灣易學專家曾子南。王博士是御田集團創辦人，提供安全現代化、專業科學化的漢方本草，成功協助許多知名上市櫃企業，建構漢方溯源的食品安全系統。王博士對 N9 Spaces 在養生健康與環保議題上給予許多寶貴意見。

Speaker: Vance Nobe, CEO, Akari Energy, Houston, Texas
Topic: The Challenges of Developing Large-Scale Solar Power

Abstract: Utility scale solar power plants require a multitude of steps to complete before construction begins. This year, we are starting construction of our largest solar power system yet, which is 100 Mega-Watts located in Hobbs, New Mexico. This project has over a \$100 million valuation and has taken 8 years to develop. This project occupies 640 acres of land and uses 182,000 solar panels. Presented are the journey, the challenges, and the partners involved to execute such a large solar project.

About the Speaker: Vance Nobe is President, CEO and Founder of Akari Energy which was established in 2008 in Houston, Texas. His combination of management, sales, and technical expertise has driven Akari Energy's growth and profitability over the past 14 years. As CEO/President of Akari Energy, he has developed relationships with landowners in rural areas throughout the United States. He has also cemented relationships with long term clients such as Rice University and RMS Foods. Mr. Nobe is also board certified by the North American Board of Certified Energy Practitioners (NABCEP) as a solar PV Installation Professional.

Mr. Nobe is a published photographer for his pictures of the Totonac burial sites in central Mexico. These photos are now in two academic textbooks, which were the first ever published pictures of these tombs. Also, he was on an episode of Animal Planet: Animal Cops Houston, for his adoption of a canine in dire need.

He has a Bachelor of Science degree in Electrical Engineering, Power Emphasis, from the California Polytechnic University at Pomona in California. Prior to his engineering studies, while he attended high school, he also attended UC Berkeley in Biophysics under the Accelerated High School Student Program. He also has a MIT Sloan Certificate in Blockchain Technology.

Speakers: Chi-Chung Chang (張濟群博士), PhD, Principal, CPD Consultants; Adjunct Faculty, University of Houston, Houston, Texas
Jonathan Greene, PE, CPD Consultants, Houston, Texas
Topic: Green Building Design and Construction in Response to the Global Weather

Abstract: Green building design and construction offer practical solutions for mitigating the impacts of climate change and fostering resilience in the face of evolving global weather patterns. The objective of this presentation is to focus on green construction methods and benefits in applying the Leadership in Energy and Environmental Design (LEED) principles. Green building design and construction play a crucial role in responding to global weather challenges including:

1. Energy Efficiency: Green buildings are designed to minimize energy consumption through efficient insulation, lighting, and heating/cooling systems.
2. Renewable Energy Integration: Many green buildings incorporate renewable energy

- sources such as solar panels, wind turbines, or geothermal systems.
3. Passive Design Strategies: Green buildings often employ passive design strategies like orientation, natural ventilation, and shading to optimize natural light and airflow.
 4. Water Conservation: Green buildings implement water-saving features such as low-flow fixtures, rainwater harvesting systems, and greywater recycling.
 5. Materials Selection: Sustainable building materials with low embodied energy and minimal environmental impact are prioritized in green construction.
 6. Resilience Planning: Green building design considers resilience to extreme weather events such as storms, floods, and heatwaves.
 7. Community Benefits: Beyond individual buildings, green design principles can be applied at the neighborhood or city scale to create resilient, sustainable communities.

About the Speakers: Dr. Chang (張濟群博士) is a Principal Consultant for CPD Consultants. Dr. Chang has over 40 years of experience in managing and conducting architectural planning, engineering design, construction management, and sustainability and resiliency planning projects for local, state and federal agencies, health care institution, education and research institutions as well as Fortune 100 firms. He currently teaches construction management at the University of Houston. He is also an adjunct faculty member of the School of Architect at Prairie View A&M University. His diversified technical background and strong management skills grant him the privilege to lead multi-discipline project teams and subcontractors to provide cost effective solutions to clients. He received his Master's degree from Oklahoma State University in 1985 and his PhD degree from Rice University in 1990.

Mr. Jonathan Greene is Principal Engineer at CPD Consultants. He is a highly skilled Environmental project engineer with over 50 years of experience in Projects involving Complex Mission Critical Facilities. As an Environmental Engineer, Mr. Greene brings multi-faceted experience to ensure the success of the Environmental Design Tasks for Projects. He graduated from Yale University, in New Haven, Connecticut, with a Bachelor of Arts (BA) in 1964. He received his Master of Science (MSCE) in 1969 from Columbia University, New York.

Speaker: Doug Coenen, PE, ENV SP, Walter P. Moore Engineering, Houston, Texas
Topic: Engineering Design for Flood Protection in the Greater Houston Area

Abstract: Cities face a growing range of adversities and challenges in the 21st century from the effects of climate change to growing migrant populations to inadequate infrastructure to pandemics to cyber-attacks. Resilience is what helps cities adapt and transform in the face of these challenges, helping them to prepare for both the expected and the unexpected. Variation of weather pattern has contributed to increasing both the frequency and magnitude of natural disasters such as flooding events, sea level rising, draught, and other adverse events. Communities need to be aware of the different types of disasters prevalent in their areas and of the specific precautions to take. Disaster mitigation needs to be focused on disaster protection planning and mitigation measure implementation at a local to regional scale. It requires a significant number of resources and time to conduct mitigation planning and mitigation implementation in the communities. Local/facility disaster protection is also needed to protect residences and business. Our focus for this presentation is to summarize recent projects that mitigate the flood disaster in the greater Houston area.

About the Speaker: For Walter P Moore, Mr. Coenen leads the civil engineering group for forensic engineering and federal projects. He has specialties in design associated with drainage, flooding, flood protection, pavement, and utilities. His diverse range of design experience includes civil/site design; geometric and vertical design of roadways; water main and sanitary sewer main design; hydrology and hydraulics including storm drain design, detention ponds; and erosion control, signing, and striping layout. Mr. Coenen has designed federal, state, municipal, and private infrastructure engineering projects including facility upgrades and rehabilitation. He received his Master of Science in Environmental Engineering from Old Dominion University and his Bachelor of Science in Civil Engineering from George Mason University, leading to his engineering licensure in Texas, Louisiana, Virginia, West Virginia, and North Carolina.

Speaker: Keith Koski, MArch, Manager of Recycling and Reuse Warehouse, Solid Waste Management Department, City of Houston
Topic: City of Houston Reuse Warehouse for Building Materials - A Innovative Program at 15 Years

Abstract: Construction and demolition materials constitute 30% of the total waste generated globally and locally. Much of the material can be diverted from landfills through conservation, reuse, and recycling. For-profit and non-profit organizations are often limited to only diverting materials that can garner revenue in the marketplace. In 2009, the City of Houston undertook an innovative program that avoids marketplace limitations by making diverted materials available to non-profit organizations, schools, universities, and government agencies at no cost in any available quantity. In this way, a wider variety of materials can be diverted from landfills.

Over the last fifteen years, the Reuse Warehouse has proven to be a financially lean, effective, and sustainable program. Currently, it remains the only operational reuse model of its kind in the United States but will soon be replicated. This presentation will describe the greater construction and demolition waste generation context using alternative but familiar measurement devices, detail the program's development process, identify major causes and obstacles to materials reuse, describe unexpected positive cultural collaborations, and share additional success stories.

In addition, there will be a brief update on the City of Houston's residential single-family post-consumer recycling program, and recent initiatives with multi-family, commercial, organics and other categories of recycling. This will be followed by opportunities for questions and discussion.

About the Speaker: Mr. Keith Koski has spent most of his life in Houston, Texas. From high school through college, he worked in the construction field. He advanced from multiple trades to design/build contracting and eventually architecture. He holds a Bachelor of Arts with honors in History from New York University and a Master of Architecture from Rice University.

After witnessing the vast amount of reusable building materials wasted in the construction industry, he focused on avoiding the demolition of structures, choosing to deconstruct and reuse as many components as possible, thereby diverting materials from landfills.

In 2009, the City of Houston Department of Solid Waste Management developed the Building Materials Reuse Warehouse program. Seeking to increase the types and volume of materials diverted from landfills, Mr. Koski applied for and was named the program's first Manager. The Reuse Warehouse accepts a wide variety of building material, diverts it from landfills, and makes it freely available to non-profit organizations, schools, universities, and government agencies in any quantity. No material is sold or given to the public. After 15 years, it remains the only reuse program of its kind in the United States.

In addition to managing the Reuse Warehouse, Mr. Koski served as Interim Recycling Manager for the City of Houston from 2021 to 2023. This temporary position provided a rapid immersion into post-consumer recycling to complement building materials reuse. Presently, he continues to learn and grow in both fields.

Speaker: Clifford C. Lee (黎靖宇博士), PhD, Lee Plastics Consulting, Pearland, Texas
Topic: Technology Frontiers and Sustainability Development of Polyethylene - the Largest Volume Plastic Material in the world

Abstract: Polyethylene is the largest volume plastics in the world with about 120 million tonnes of consumption in 2022. It impacts many aspects of our daily lives in automobiles, housing, footwear, infrastructure, packaging, etc. This presentation has two parts: Technology Frontiers and Sustainability Development. The former encompasses catalyst/process advancement, which led to a new generation of strong and lightweight materials with superior performance and new applications. Also included in the Frontiers is the shale gas boom in North America, which led to cheap and accessible natural gas. This translates to about 50% feedstock cost reduction for polyethylene as natural gas contains up to about 14% ethane which is handily cracked to ethylene. Sustainability Development has recently been a big wave engulfing the whole world. It has many fronts including plastic circularity, alternate feedstock, renewable sources, and more. The "Sustainable Development" was first defined and famously coined by the 1987 United Nations Brundtland report "Our Common Future". Also delineated in this presentation will be the path forward for polyethylene in the next few decades.

About the Speaker: Dr. Lee is the founder of Lee Plastics Consulting in Houston, Texas. He earned his PhD in Chemistry from Rutgers University, followed by postdoctoral work in polymer research at Cornell and Purdue Universities. He has held positions with industrial companies such as Chevron Phillips, Solvay Polymers, LyondellBasell, and Formosa Plastics. He additionally possesses international consulting experience in market analysis and technology assessment with Chemical market Resources and Townsend Solutions. He has been an organizer with prominent conferences in the field and holds 13 US patents.

Speaker: Michael Liu, President, American P&G Corp, Houston, Texas
Topic: Environmentally Friendly and Biodegradable Starch Glue Adhesive

Abstract: Environmentally friendly and biodegradable adhesives are based on starch and other organic and inorganic ingredients. For range of applications, starch glued adhesives give higher performance than petroleum-based adhesives. Our green adhesives are manufactured from our exclusive formula of bio-based raw materials with our unique in-house processes. For example: usage of fly ash from flue gas desulfurization to make

compositions for building. Today our adhesives are trusted by respected customers and companies across a variety of sectors for the bonding of building materials, woods, papers, and briquettes.

About the Speaker: Michael Liu is in business of water & wastewater treatment technology and environmental projects. He has a B.S. in Chemistry from Chinese Culture University, Taiwan, and M.S. degrees in Chemical Engineering from the University of New Mexico and Industrial Engineering from Southern Methodist University, Texas. He worked at Bechtel Corp. as a start-up engineer in the third Taiwan Nuclear Power project in 1984 and at Euroasia Corp. in Taiwan as a project manager in petrochemical projects until 1988. After many years' expertise, he returned to the United States and founded America P & G Company, teaming up suppliers and contractors to work projects internationally. He successfully completed a hundred installations for water plants and wastewater treatments in the Far East Market. Currently, he is retired and lives in Sugar Land, Texas.

His efforts in helping the community can be seen through his services on the board of the Criminal and Public Safety with Houston-Galveston Area Council (H-GAC) for the City of Sugar Land Police Department, which funded millions of dollars each year for community crimes protection and safety enforcement in region of Houston-Galveston Area. He has also served on the board of the Friendship Committee of Fort Bend County and Global Initial of Fort Bend County Judge Committee, which support the county in making internationally education and culture exchanges. To encourage citizens to vote and mainstream connections, he is being elected as a GOP precinct chair in the Greatwood area. In past years, he has served as chair of the Chinese American Professional Association in 2005.

8:00 a.m. – 11:30 am. ***Nano and Composite Technology Session (奈米及複合科技講座)***
Co-Chairs: **Howard Paul (浦浩德博士), PhD, PE, Engineering Manager, America P&G**
 Guoqiang Li (李國強博士), PhD, Professor, Louisiana State University (LSU)

Note: Earn 4 hours of Professional Development Hours (PDH) by attending this session. Certificate will be issued as per request after conference. (賺取4 PDHs, 根據要求會議後發出證書)

Speaker: Howard Paul (浦浩德博士), PhD, PE, Engineering Manager, America P&G, Houston, Texas
Topic: Nanotechnology New Blast-proof Materials (納米科技的新防爆材料)

Abstract: In this presentation, I will cover the patented Nanotechnology Blast-proof materials that can be applied in petrochemical plants, refineries, and the oil and gas industry to reduce the risk of casualty and property damage from gas cloud explosions. This project also covers the risk management plan (RMP) to prevent hazardous and explosive chemicals from accidental releases. The RMP project utilizes high-tech computer software that can technically simulate the off-site consequences of accidental hazardous (flammable, explosive, and toxic gases) chemical releases from refineries and, oil and gas plants. The computer simulation results can be displayed on the local maps for hazard analysis to reduce the risk of explosive chemical accidental releases.

Speakers: Guoqiang Li (李國強博士), PhD, Professor, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, Louisiana
Topic: Multifunctional Syntactic Foam (多功能的複合泡沫)

Abstract: In this talk, I will discuss recent studies in multifunctional syntactic foams in my lab. As a lightweight material, syntactic foams have many applications in engineering structures and devices. In recent years, my lab has designed, synthesized, manufactured, and tested several multifunctional syntactic foams with functionalities such as shape memory, self-healing, recycling, electrical conductivity, electromagnetic interference shielding, flame retardancy, and 3D printability. I will briefly discuss the progress made over the years.

Speaker: Cheng Yan (严成博士), PhD, Department of Mechanical Engineering, Southern University, Baton Rouge, LA
Topic: Enhancing Shape Memory Vitrimers with Machine Learning: A Path to High-Performance Materials (透過機器學習增強形狀記憶的 Vitrimers: 高性能材料之路)

Abstract: This study leverages machine learning (ML) to address the challenge of simultaneously achieving impressive recycling efficiency, excellent shape memory performance and high glass transition temperature (T_g) in shape memory vitrimers (SMVs). By employing supervised and unsupervised ML techniques, we navigate the complex design space of SMVs, identifying strategies for thermally robust SMVs (TRSMVs) with enhanced performance characteristics. Our approach led to the development of TRSMVs that surpass conventional limitations, with one variant achieving a T_g of 233.5°C, recycling efficiency of 84.1%, and recovery stress of 33 MPa. These results highlight the potential of ML to revolutionize smart polymer design by optimizing chemo-physical properties for advanced material applications.

Speakers: Chengbin Yu (俞程斌博士), PhD, Postdoctoral Researcher, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA
Guoqiang Li (李國強博士), PhD, Professor, Louisiana State University, Baton Rouge, LA
Topic: Electric Power Generation by Connecting Two Form-Stable Phase Change Materials (PCMs) (透過連接兩種形狀穩定的相變材料 (PCMs) 來發電)

Abstract: A smart and creative energy harvesting concept has been mentioned using form-stable phase change material (PCM) composites without any thermoelectric device. To confirm the advanced concept, two kinds of form-stable PCM composites with different phase transition temperatures and electrical resistivities are combined to make a PCM based thermoelectric power generator (TEG) according to the Seebeck Effect. Therefore, we propose the usage of different humidity on the surfaces of the two connected PCM composites and dissolved carbon dioxide (CO_2) to conduct the ion movements for producing the electricity. The supporting material is required to fabricate the form-stable PCM due to the leakage problem, and we 3D printed a hydrophilic shape memory vitrimer (SMV) container to hold the pure PCMs. The two kinds of form-stable PCM composites were obtained after pouring the liquid pure PCMs into the SMV containers. It was found that SMV supported PCM composites can generate electrical energy harvesting at different relative

humidity and CO₂ concentrations during the light-on/off process. This study shows that greenhouse gas can be employed to produce energy harvesting, and provides a new opportunity for clean energy development.

Speakers: Xiaowei Mu, PhD, Postdoctoral Researcher, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA
Guoqiang Li (李國強博士), PhD, Professor, Louisiana State University, Baton Rouge, LA
Topic: Plasma Modification Interfaces in Nonflammable Ceramic Nanofiber-Polymer Electrolytes with High-Ionic Conductivity for Lithium Metal Batteries (用於鋰電池具有高離子電導率的電漿界面在不可燃陶瓷奈米纖維聚合物電解質)

Abstract: Ceramic-polymer composite electrolytes hold a great promise as next-generation electrolytes because of strong mechanical properties and wide electrochemical stability window. However, it remains challenge in improving ionic conductivity. In this work, plasma treatment has been performed on Li_{0.33}La_{0.557}Ti_{0.995}Al_{0.005}O₃ (LLATO) nanofibers. The treated nanofibers are then incorporated with a polymer matrix to form a composite electrolyte. Plasma treatment has modulated oxygen vacancies, functional groups, polarity, and interfacial interaction of LLATO-polymer, which has improved lithium-ion transport at interface of LLATO-polymer electrolyte. As a result, the LLATO-polymer electrolyte shows enhanced ionic conductivity. This work has implication in design of ceramic-polymer composite electrolytes for solid state lithium metal batteries.

8:30 a.m. – 11:30 a.m.	Health Session (健康講座): Materials in Dentistry (牙科材料知多少)
Co-Chairs:	Hue-Teh Shih (施惠德醫師), MD, MPH, Cardiac Electrophysiology

Speaker: Michael Ming-Ying Chiang (江明穎), BDS, MS, Brilliant Smiles Orthodontics
Topic: Materials in Orthodontics (Virtual Presentation)

Abstract: Dental malalignment and malocclusion can affect facial morphology and labial configuration, phonetics, and mastication, causing pain, trauma, and mental disturbance. Orthodontics is the discipline that uses force to gradually correct the alignment of the teeth. The materials used, including shape-memory alloy and polymer-based correction prostheses, can have various applicable conditions.

牙齒排列及咬合不齊會影響顏面唇形，語音，和咀嚼，引致疼痛，創傷，與心理障礙。牙齒矯正使用應力慢慢使牙齒能排列整齊。使用的材料，包括記憶金屬線，塑料牙套等，有不同的適用狀況。

About the Speaker: Dr. Michael Ming-Ying Chiang grew up in various parts of the world throughout his childhood where he became fluent in both Mandarin and English. Dr. Chiang received his Bachelor's degree in dentistry from Shanghai Jiao Tong University, Shanghai, China. In 2012, he was accepted into the University of California, Los Angeles (UCLA), where he received his specialty Certificate in Orthodontics and a Master's degree in Oral Biology. During his training at UCLA, he became an expert in both traditional braces and clear aligner

orthodontic treatment. In 2019, Dr. Chiang opened his orthodontics clinic, Brilliant Smiles Orthodontics, to serve the Sugar Land/Sienna area. He is experienced with patients from all age groups and recommends everybody to have their first orthodontic exam as early as 7 years old.

Speakers: Hsiu-Wan Meng (蒙秀婉), DDS, MS, Blackhorse Periodontics and Implant Dentistry
Topic: Materials in Periodontics and Dental Implant

Abstract: Materials utilized in periodontics and dental implants play a crucial role in achieving successful treatment outcomes. The presentation will provide an overview of various materials commonly used in these fields. We will start with local anesthesia and sutures, which are essential for ensuring patient comfort and proper wound closure following surgical procedures. In deep cleaning through scaling and root planing, additional therapeutic measures may involve the application of antibiotics such as Arestin® (minocycline microsphere), which helps combat localized antimicrobial activity. Periodontal regeneration surgeries often require the use of diverse bone grafting materials, including autogenous bone, allografts, xenografts, and synthetic bone. These are often complemented by membranes to facilitate tissue regeneration. Biological materials such as enamel matrix proteins (Emdogain®), platelet-derived growth factor (GEM21®), and platelet-rich fibrin (PRF) further enhance tissue regeneration and healing. These materials can be combined for various bone grafting procedures, including those around the teeth, in the sockets and sinuses, and on the jawbone. Gum grafting materials, such as autogenous grafts (gingival grafts and connective tissue grafts) and allografts like Acellular Dermal Matrix (ADM) (AlloDerm® and MicroDerm®), contribute to improving periodontal tissue stability and esthetics. In the field of dental implantology, commonly used materials for implant fixtures include titanium and zirconia. Restoration options range from single implant crowns to implant bridges, implant dentures and full-arch fixed implant restorations. Understanding and effectively utilizing these materials and techniques are essential for periodontal and implant specialists to ensure optimal outcomes in patient care and treatment.

About the Speaker: Dr. Hsiu-Wan Meng completed her dental degree at Kaohsiung Medical University, Taiwan, finishing first in her class. After graduation, she practiced general dentistry for several years before joining The Ohio State University, where she completed her three-year residency and a Master of Science degree in periodontics. Dr. Meng is a board-certified periodontist and a diplomate of the American Board of Periodontology. She is a professional specializing in the field of periodontics and implant dentistry and has been very active in both academia and private practice. Dr. Meng is currently an Associate Professor at The University of Texas Health Science Center in Houston (UTHealth) School of Dentistry. She is also a pioneer in clinical research of dental implants and periodontology. She has published many scientific articles in peer-reviewed dental journals and presented at both national and international conferences.

Speakers: Jennifer Kan (闕若玫), DDS, Fountains Family Dental
Topic: Materials in Root Canal, Crowns, Bridges, and Dentures

Abstract: General dentistry emphasizes the importance of preventive dental care. Common oral issues include dental care, fracture of teeth, trauma, bleeding, infection, etc. This

presentation will discuss most recent developments in dental technology, materials in dental repair, and substitutes for missing teeth.

一般牙科強調的是牙齒護理的重要性。齲齒，牙齒斷裂，創傷，出血，感染等都是常見的口腔問題。本次演講將探討牙科技術的最新進展，牙齒修復材料，和缺失牙齒的假體替代選項。

About the Speaker: Dr. Jennifer Kan finished her undergraduate studies at Baylor University, Waco, Texas. She completed her dental education at the University of Texas Health Science Center in Houston School of Dentistry. She has been practicing General Dentistry for more than 20 years and is the owner of Fountain Family Dental in Sugar Land, Texas.

9:30 a.m. – 11:30 a.m.	<i>Young Professionals Networking Session (青年專業人士交流講座)</i> Joint Chinese College Alumni Association of Southern USA (JCCAA) 美南大專院校聯合校友會協辦
Co-Chairs:	Amy Ku (辜千慈博士), PhD, Scientist, Baylor College of Medicine Pei-Ching Tai (戴珮青博士), PhD, President, JCCAA

Speakers: JoAnne Ray (芮久玫), Director of Community Engagement, Office of the City Controller, City of Houston

Topic: Mastering Office Etiquette for Professional Success

Abstract: Navigating workplace norms can be a bit puzzling, especially with the ever-evolving landscape of professional conduct and societal expectations, but don't worry! We've crafted a handy guide specifically designed to help you sail through the intricacies of office etiquette to foster a positive and cohesive work environment. Office etiquette encompasses a wide array of behaviors and customs expected in professional settings, covering everything from your attire and communication style to how you navigate shared workspaces. Embracing these practices not only showcases your professionalism, but also sets the stage for smoother collaborations and interactions. In recognition of its importance, many organizations provide workplace etiquette training to their employees. While office norms may vary across cultures, adhering to these fundamental principles always demonstrates respect for your colleagues and the collective goals you're working towards. So, dive into this guide and let's elevate our professional game together!

About the Speaker: JoAnne Ray graduated with a BS in Forestry from the Chinese Culture University in Taiwan. With three years of experience as a Data Analyst at the Council of Agriculture, she spearheaded the establishment of Taiwan's initial Geographic Information Systems (GISs). Subsequently, she earned an MA in Geography from the University of California, Santa Barbara, specializing in GIS and Remote Sensing. As a GIS Manager at Montgomery Emergency District – 911, Ms. Ray oversaw design, project management, and delivery of GIS analysis solutions. For over 15 years, she has collaborated with various government bodies, including Conroe Independent School District and the City of Houston, to enhance GIS development for efficient emergency response. Passionate about community engagement, Ms. Ray actively participates in local activities and facilitates voter education

outreach. Presently, as Director of Community Engagement for Chris Hollins, City Controller, City of Houston, she is dedicated to advancing the mainstream representation of Asian Americans.

Speaker: Kathy Cheng (鄭佩玲), JD, Attorney
Topic: Career Insights Mixer (職場停看聽)

Abstract: What does it take to succeed in the workplace? In today's ever-changing work environment, simply working hard is not enough. Our speaker will share personal experiences and explore key strategies for achieving career success, focusing on valuable lessons best learned early on. Ms. Cheng, drawing from over 40 years of combined experience across various industries and community engagement, will shed light on essential tactics for navigating today's workplace with confidence. Join us as they share invaluable insights and essential advice, providing you with the tools you need to thrive in today's professional world. After the interactive panel discussion, there will be a networking session, welcoming professionals of all career stages to connect and engage.

About the Speaker: Kathy Cheng, born in Taiwan, is a community activist and an advocate for her clients in the field of law. She earned her undergraduate degree in Bachelor of Science from Louisiana State University and received her law degree from South Texas College of Law. A founding member of Cheng & Associates, PLLC, Ms. Cheng and her firm's areas of practice include but are not limited to complex commercial litigation, family law, probate, tax, and real estate. In 2018, Ms. Cheng became the first Asian American candidate to run for a statewide position as the Democratic nominee for the Texas Supreme Court. Besides being passionate about the practice of law and advocating for community activism, she is also busy as a mom to her three wonderful children, who live with her in Houston.

11:30 a.m. – 1:30 p.m.	<i>Luncheon and Keynote Address (午餐專題演講)</i>
Master of Ceremonies:	Eddy Lee (李怡德博士), PhD, ACAP President-Elect

Speaker: Da-Jeng Yao (饒達仁博士), PhD, General Director, Mechanical and Mechatronics Systems Research Laboratories, ITRI (工業技術研究院 機械與機電系統研究所所長)
Topic: Next Generation of Intelligent Manufacturing Factory (打造新世代智慧工廠)

Abstract: In the era of rapid change, technological progress, supremacy, the raging epidemic, inflation, the war between Russia and Ukraine, and climate change have all led to tremendous changes in global manufacturing. Taiwan, as an industrial division of the supply chain in Asia, holds a key position in the supply chain and must be able to respond quickly to these changes. Today, we are assisted by consultants to build smart factories systematically and promote the active application of AI in the manufacturing field, from the integration of digital information to the technologies for smart manufacturing in ITRI, such as Prognosis & Diagnosis Maintenance Systems, automatic inspection technologies of AI+AOI, intelligent application of robots, etc. With the explanation of the content in today's topic, the

technologies and experiences accumulated in Taiwan will have the opportunity to be learned and used by others around the world.

About the Speaker: Dr. Yao received his PhD from the Department of Mechanical and Aerospace Engineering, University of California at Los Angeles (UCLA) in 2001. After joining National Tsing Hua University, his research focused on fertilization on a chip, intelligent gas sensing system, EWOD and digital microfluidic system, and Tera Hertz system development. There are more than 120 multidisciplinary projects running or completed under his research team with other organizations (NTHU LS, CHEM, EE, PME, NEMS, and ESS, NTU ME, NCTU ME, Chang-Gung Hospital, and ITRI, etc.) and more than 130 journal papers published at top journal. In August 2021, he was invited to serve as General Director of the Mechanical and Mechatronics System Lab (MMSL) at the Industrial Technology Research Institute, Taiwan. The goal of Institute is to conduct and develop advanced research for industries, including research for smart and green manufacturing, Autonomous and electronic car (EV), Robotics, Drones, Railway systems, and the Aerospace industry.

1:30 p.m. –	<i>Artificial Intelligence Session (人工智慧講座)</i>
4:00 p.m.	Federation of Chinese Traders Alumni Greater Houston (FCTAGH)
	休士頓華商經貿聯合會協辦
Chair:	Stephen Huang (黃壽萱教授), PhD, Professor, University of Houston, Houston, Texas

Speaker: Stephen Huang (黃壽萱教授), PhD, Professor, University of Houston, Houston, Texas
Topic: Generative AI: Perspectives, Challenges, and Opportunities

Abstract: The talk will delve into the fascinating world of Generative AI, discussing current perspectives, the inherent challenges, and the vast opportunities it provides. We will focus on the impacts of Generative AI and its disruptive force on the job market, unveiling losses and gains. We will also discuss potential scenarios for the future of work, leisure, and human-AI coexistence in an increasingly AI-driven world. Join the dialogue on responsible development and harnessing the power of Generative AI for societal advancement.

About the Speaker: Professor Stephen Huang received his BS in Mathematics from the National Cheng Kung University of Taiwan and his PhD in Computer Science in 1981 from the University of Texas-Austin. Since then, he has been at the University of Houston, where he is currently a full professor. Dr. Huang is also a life senior member of IEEE and a member of ACM. His main research areas include Cybersecurity, Algorithms, and Data Analytics, and he has published over 100 refereed conference and journal papers. His current research detects active adversaries hiding behind anonymity networks and AI Security.

Speaker: Kang-Lin Hsieh (謝岡霖博士), PhD, Post-Doctoral Fellow, MD Anderson Cancer Center
Topic: Digital Biology: How AI Transforms the Landscape of Biology and Shapes Future Opportunities

Abstract: AI is currently revolutionizing numerous fields, including an emerging one: digital

biology. However, digital biology's definitions and potential impacts on our understanding of biology and medicine are still the subject of ongoing discussion. This discussion will center on how generative AI can offer unprecedented opportunities in drug development, disease prevention, multi-omics data integration, and trial design. Alongside these opportunities, generative AI also presents certain disadvantages. This discussion will cover existing regulations and technologies that could mitigate these drawbacks.

About the Speaker: Dr. Kang-Lin Hsieh is currently employed in the Department of Genitourinary Medical Oncology at the MD Anderson Cancer Center. He was previously granted a fellowship from the Computational Cancer Biology Training Program to develop a unique AI algorithm that accommodates multiple modalities for early cancer prediction. His work builds on his experience to further progress in foundation models and generative AI for cancer research.

Speaker: Chien-Pu Huang (黃千溥建築師/博士候選人), PhD candidate, National Taiwan University, Taipei, Taiwan

Topic: Carbon Neutrality in the Built Environment: A Dream or Reality?

Abstract: As urbanization accelerates, achieving carbon neutrality in the built environment is a crucial yet complex challenge. This presentation explores the pivotal role of Artificial Intelligence (AI) in overcoming these complexities. Leveraging AI alongside Building Information Modeling (BIM) and Geographic Information Systems (GIS) offers groundbreaking potential for precise carbon footprint analysis, efficient resource management, and enhanced sustainability strategies. AI drives the transition towards sustainable urban development by enabling smarter decision-making and fostering innovative solutions. This exploration underscores AI's transformative impact, illustrating that the dream of carbon neutrality in the built environment is within grasp, promising a new horizon of environmental stewardship and sustainable progress.

About the Speaker: Ms. Chien-Pu Huang is a PhD candidate at National Taiwan University, specializing in Computer-Aided Engineering and Construction Management. She holds a Master's in Computer-Aided Design from National Chiao Tung University and a Bachelor's in Architecture from National Cheng Kung University. She has robust experience in the architecture and construction sectors, including roles as a senior engineer at Taiwan Semiconductor Manufacturing Company and design director at Design.Injoy Interior Design Company. Ms. Huang's academic focus is integrating Building Information Modeling (BIM) with Geographic Information Systems (GIS). Her research aims to advance carbon neutrality in urban environments by optimizing the interoperability of BIM and GIS to track and manage carbon emissions from buildings effectively. As a Taiwan Registered Architect, her expertise extends to construction project management and procurement. Chien-Pu is also deeply involved in research on BIM-FM integration, which significantly impacts industry practices and sustainability efforts.

1:30 p.m. –	Popular Science Session (科普)
4:00 p.m.	Formosa Association of Student Cultural Ambassadors (FASCA) 海外青年文化大使協辦 Science and Technology Division, Taipei Economic and Cultural Office in Houston 經文處科技組協辦
Chair:	Pei-Ching Tai (戴珮青博士), PhD, FASCA Advisor Peggy Chiu (邱佩冠), FASCA Advisor

Speaker: Pin-Chuan (PC) Chen (陳品銓教授), PhD, Director, Science and Technology Division, Taipei Economic and Cultural Office in Houston
Topic: Science and Technology Promotion in Taiwan

Abstract: In Taiwan, people truly love science and technology, and they do a lot to share it with everyone. Places like the National Museum of Natural Science (自然科學博物館) and the Taiwan Science Education Center (台灣科學教育館) organize fun events like exhibitions and workshops where visitors can learn interesting new things about science every year. The National Science and Technology Council (國科會) also encourages university professors to talk about their research in a way that everyone can understand. These events are not just about presenting and exhibiting new discoveries; we also want to encourage more curiosity about and interest in science and technology. The Council is working hard to attract more young talent who understand and enjoy science and technology, to encourage their interest and foster their abilities so they can dedicate themselves to science and technology and contribute to creating a better world.

About the Speaker: Dr. Chen received his PhD from the Mechanical Engineering Department of Louisiana State University, in May 2009. Following graduation, he worked in the Microfluidics Manufacturing Programme (MMP) of the Singapore Institute of Manufacturing Technology (SIMTech) from June 2009 to Aug 2011. He holds a Distinguished Professorship in the Mechanical Engineering Department of National Taiwan University of Science and Technology (NTUST) since February 2022, and has been recognized as a Fellow of the Royal Society of Chemistry since February 2020. He currently serves as Director of the Science and Technology Division of Taipei Economic and Cultural Office in Houston, a role he has held since August 2023. His major duties include promoting international academia cooperation between the US and Taiwan as well as promoting popular science to youth.

Speaker: San-Pei Lee (李姍蓓), Life Science Teacher (IB Environmental Systems & Aquatic Science), Lamar High School (Houston ISD)
Topic: Teaching Intersectional Environmentalism: Protecting People + Planet

Abstract: Intersectional environmentalism centers the protection of both people and the planet. Civil rights advocate Kimberlé Crenshaw initially coined the term “intersectionality” in 1989 to refer to the unique experiences of discrimination people face from overlapping social identities. More recently, eco-influencer Leah Thomas built upon Crenshaw’s work to assess how the social injustices affecting marginalized communities are interconnected with

environmental issues. She called on environmental activists to stand in solidarity with low-income communities and people of color, who are more likely to be exposed to air, water, and soil pollution, and to advocate for a more inclusive environmentalism in their own organizations. This talk will discuss the importance of centering intersectional environmentalism in science education in all schools, to uplift the people's voices and create impactful change to save the planet.

About the Speaker: Ms. Lee is a high school science teacher with a B.A. in Ecology & Evolutionary Biology from Rice University and an M.S. in Ecology & Evolutionary Biology from National Taiwan University. She has taught at Lamar High School for two years and previously taught Biology at Heights High School for three years. As the sponsor of Lamar High School's Environmental Club, she collaborates with environmental organizations such as Climate Reality Houston, SPLASH (Stopping Plastics and Litter Along Shorelines), and Galveston Bay Foundation to promote environmental interventions such as community tree-planting and trash cleanups. She also raises environmental awareness at her school through recycling and Earth Day events.

Speaker: Hongyan Li, MD, PhD, Biology Teacher, DeBakey High School
Topic: Forensic Science

Abstract: Fingerprint analysis plays a crucial role in crime investigation because of its reliability, widespread acceptance, and effectiveness in identifying individuals involved in criminal activities. We will discuss types of fingerprints and their unique characteristics. Students will also learn to demonstrate how to collect a latent fingerprint from a "crime scene" through hands-on activities.

About the Speaker: Dr. Hongyan Li has been a Science and CTE teacher for 9 years. Currently, she is a teacher at the Health Science Department of DeBakey High School for Health Professions in Houston ISD. In 2017, she launched the Forensic Science course at DeBakey High School for Health Professions. It soon became one of the most popular classes at DeBakey. Dr. Li earned her PhD in Neuroscience in 2007 from the University of Arkansas and had been a postdoctoral fellow conducting research on retinal diseases at University of Texas Health Science Center at Houston before she decided to become a teacher.

1:30 p.m. –	<i>Energy Session (能源講座): AI and Machine Learning in Oil Field & New Energies</i>
4:30 p.m.	Chinese American Petroleum Association (CAPA) 美國華人石油協會協辦
Chair:	Chih-Cheng Lin (林志成), Senior Production Engineer, SME – Sand Control, Shell Oil Company
	Tzu-hao Yeh (葉子豪博士), PhD, Reservoir Engineer, Shell International E&P

Speaker: Frank Frey, Principal Energy Services, GHD
Topic: Achieving Net Zero – The Limits of Electrification

Abstract: The Policy makers are driving a strategy of electrification to achieve Net Zero by

2050. We will examine what an electrification strategy looks like at scale; what infrastructure is required; and the constraints to deploy such infrastructure. We will compare the constraints of electrification to the constraints of other Net Zero strategies, particularly blue hydrogen.

About the Speaker: Based in Houston, Texas, Mr. Frey has been designing a broad range of oil & gas facilities for over 30 years. His experience includes design at refining and petrochemical facilities, as well as mid-stream and upstream projects. Mr. Frey has a strong background in underground storage facilities, brine infrastructure, terminals, and pump / compressor stations.

Mr. Frey is currently supporting GHD's Future Energy Program by assisting the oil & gas and mid-stream industries with the energy transition. He has developed projects in Hydrogen, A-CAES, pipeline change of service, carbon sequestration, and renewable natural gas.

Speaker: Chuen-Song Chen, PhD, Data Scientist, Shell Global Solutions (US) Inc.
Topic: Subsurface Image Morphing Operator using Deep Learning Techniques

Abstract: Velocity uncertainty is one of the major challenges for subsurface imaging in oil & gas exploration. A surrogate migration engine based on image morphing operation can significantly reduce migration costs and speed up subsurface velocity model building workflow. We developed a machine learning based approach to predict subsurface image change due to velocity perturbation. This fast image change estimator takes the three channel inputs (an initial velocity model, its migrated image, and a velocity perturbation) and outputs the new image due to the velocity change. It is implemented using deep neural networks with 3D Fourier neural operator. We verified this image morphing operator with both synthetic data and field data experiments. The goal of this study is to speed up the velocity model scenario tests.

About the Speaker: Dr. Chen earned his degrees in electrical and computer engineering, with 15+ years of O&G industry experience working primarily on seismic exploration projects, and has been actively working on developing specific neural network architectures to solve relevant problems in seismic processing and imaging space.

Speaker: Zach Liu, PE, PG, CFA, Subsurface Director CCUS, Harvestone Low Carbon Partners
Topic: Challenges and Opportunities in Large-Scale Carbon Capture Storage (CCS)

Abstract: Large-scale CCS deployment is imperative to reach the global average 2-degC temperature as outlined in the Paris Agreement. While momentum is building on some CCS pilots and small-scale commercial initiatives, large-scale commercial facilities remain scarce.

Cost is a barrier. Despite government incentives, the economics of CCS remain profitable for few projects. Implementation of most CCS projects remains uneconomical or marginally profitable. The capture cost remains high. Hefty upfront CapEx for transportation and storage infrastructure burdens the economics. Lower return cannot meet the risk adjusted return requirements of funding sources.

Transport and storage constraints. A great divergence exists between the capture capacity and the transportation and storage capacity. Low-cost CO₂ sources suitable for capture are

relatively small and scattered. Low-cost CO₂ storage sites are typically centralized CO₂ hubs with large storage capacity and require large upfront CapEx to develop.

Risk perception and tolerance. Alignment of risk perception and risk tolerance of a CCS project is an ongoing issue. For example - an O&G company building a CO₂ storage facility has a vastly different perspective on the risk of carbon storage from that of a dairy farmer along the CO₂ pipeline. When risk perception and tolerance are not aligned, or even pitted against one another for social and political purposes, it greatly increases the risk of CCS projects not coming to fruition.

Decarbonization alternatives. CCS funding is competing with other decarbonization technologies such as renewable electricity, hydrogen, geothermal, and nuclear. Some have advantages over CCS but also have their limitations.

Small-scale near-site CCS presents promising opportunities. Harvestone LCP and other companies have already operationalized such projects, paving the way for future large-scale CCS endeavors.

About the Speaker: Mr. Zach Liu is an experienced Licensed Professional Petroleum Engineer, Licensed Professional Geologist, and CFA charter holder with 20+ years in upstream Oil & Gas, specializing in CO₂/EOR/CCS for the last 13 years. Currently, he is the Subsurface Director at Harvestone Low Carbon Partners, which operates active CO₂ injection at Blue Flint CCS site. Former 60th SPWLA president. He possesses multidisciplinary skills in Petrophysics, Geology, Geomechanics, and Finance, applied across Permian Basin, Gulf Coast, Williston Basin, Eagle Ford, Rockies, Illinois Basin, conventional/unconventional, and A&D business development. He holds degrees from Beihang University, University of Houston, and University of Texas-Austin and is the owner of 3 U.S. patents, author of 25+ papers in SPE, SIG, SPWLA symposiums, journals, and trade publications. Mr. Liu is an avid golfer with a hole-in-one achievement from 202 yards with a 5-iron.

Speaker: Xuejia Du, PhD, Postdoctoral Fellow, University of Houston
Topic: Applying Machine Learning Algorithms to Predict CO₂ Solubility in Oil during CO₂ Flooding

Abstract: Carbon dioxide (CO₂) injection into petroleum reservoirs has been offering the dual benefits of greenhouse gas emission reduction and enhanced oil recovery (EOR). In the context of miscible flooding, CO₂ solubility is a critical factor in designing efficient CO₂ injection processes. Enhanced CO₂ solubility is associated with reduced oil viscosity, increased crude oil swelling, and lower interfacial tension (IFT), ultimately leading to improved oil mobility and higher oil recovery rates.

Machine Learning has emerged as an efficient and effective method to predict CO₂ solubility recently. In this study, we have assembled a comprehensive dataset for both live oil and dead oil. Artificial neural networks (ANNs), support vector regression (SVR), extreme gradient boosting (XGBoost), and the adaptive neuro-fuzzy inference system (ANFIS) algorithms are employed to deliver highly accurate predictions of CO₂ solubility. Key input parameters in our modeling effort include reservoir temperature, oil saturation pressure, oil molecular weight, and oil specific gravity in a dead oil model. The dataset is divided into training (70%) and testing (30%) subsets.

We employ a range of statistical calculations and graphical representations to assess the tool's effectiveness. Our comprehensive error analysis reveals that the ANN model we proposed demonstrates exceptional accuracy, achieving an R2 value of 0.98 for dead oil and an R2 value of 0.97 for live oil systems. The developed models and analysis techniques are meticulously validated through comprehensive experimental and field measurements.

In conclusion, our proposed ANN model stands as a valuable and accurate correlative tool, enabling rapid and precise estimation of CO2 solubility in crude oil systems. Our research offers a valuable contribution to the field, addressing the dual challenges of EOR and emission reduction. These insights hold significant value for the industry, fostering improved practices and outcomes in CO2 EOR and greenhouse gas mitigation.

About the Speaker: Dr. Xuejia Du is currently working as a postdoctoral researcher at the University of Houston. She received her PhD degree in Petroleum Engineering from the University of Houston in 2023, her MSc from the University of Kansas in 2018, and her BSc from China University of Petroleum (Beijing) in 2014. Her research focuses on CO2-EOR, CCUS, reservoir management, formation damage during the produced water re-injection process, phase behavior, petroleum geology, pressure transient test, numerical simulation, and machine learning. She won 2nd place in the SPE GCNA/SWNA Regional student paper contest (PhD division) in 2023 and received the President's Citation Award at the 57th U.S. Rock Mechanics / Geomechanics Symposium.

1:30 p.m. -	<i>Business Management Session (商業管理講座)</i>
4:30 p.m.	Global Federation of Chinese Business Women in Southern USA (GFCBW) 世界華人工商婦女企管協會美南分會協辦
Chair:	Annie Hwang (張瓊文), President, GFCBW

Speaker: Alex Shaw (蕭雲祥), MBA, Investment Consultant

Topic: How to Establish a Complete Retirement Financial Plan (如何建立一個完整的退休計劃)

About the Speaker: Born in 1953 in Taipei, Alex Shaw attended Jianchin High School. He obtained his Bachelor's degree in Chemistry from the National Cheng Kung University and his MBA from the University of California, San Francisco. Mr. Shaw is an Investment Consultant, 30 years of experience in investment and financial planning, and he holds the following licenses: S7, S24, Insurance, Specializing in Wealth Management. His primary business focus includes Asset Allocation, Retirement Planning, and Wealth Management.

Speaker: Kenneth Li (李雄), Broker, CCIM, CIPS, President, Southwest Realty Group; Chairman, Southwest Management District; Commissioner of Houston Housing Authority

Topic: How to Do Business with the Houston Housing Authority

About the Speaker: Kenneth Li is the Founder/ President of Southwest Realty Group, a full-service real estate firm in Houston, Texas, since 1988. Throughout the thirty-five years of his professional career, he has been committed to excellence in real estate development for his community. Mr. Li is a real estate specialist, developer, and consultant. He was

commended as a pioneer of Chinatown by the *Houston Chronicle*, which stated that he was the real estate broker who aided the community's growth and used his success there as an entry into the mainstream in both residential and commercial real estate. Houston Mayor Sylvester Turner, Congressman Al Green, KHOU 11, *Texas Monthly*, and Real Estate Directory News named Kenneth Li as Houston Chinatown's "Mayor". Long active in public affairs in the local community, Mr. Li served as the 2011 National Chairman of the Asian Real Estate Association of America (www.areaa.org), Chairman of the Asian Chamber of Commerce, President of the Houston Taiwanese Chamber, and Chairman of the Chinese Community Center (CCC). Houston Mayors appointed him to serve as the first Asian American board member of the City Planning Commission, Asian Advisory Board to the Houston Police, SW Houston Redevelopment Authority (TIRZ#20) board member, Southwest Management District Chairman, and Houston Mayor International Trade Development Council/Asia & Australia. International Advisory Council member, Houston AAPI Advisory Board, and committee chair of its Safety/ Business Development. Mayor John Whitmire appointed him to serve as a Houston Housing Authority Commissioner in 2024.

二零二四年科學工程技術研討會
2024 Science, Engineering and Technology Seminars (SETS)

Acknowledgements

美南國建協進會

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感謝下列單位的贊助與協助

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The Association of Chinese American Professionals Fact Sheet

ACAP is an association of Chinese American professionals with a wide variety of expertise including engineering, science, health care, business, humanity, and arts and culture. Founded in 1978, and currently with a total membership of approximately 300, the ACAP recruits its members from, but not limited to, the states of Texas, Louisiana, Mississippi, Arkansas and Oklahoma.

In 2001, the ACAP, in collaboration with JPMorgan Chase, Shell Oil Company and Marathon Oil Company, organized the inaugural Diversity Summit annual conference. This annual conference has since gained wider support and attendance from other major corporations and organizations in the greater Houston area with an attendance over 300 people.

As a non-profit organization, the ACAP strives to foster the professional development and fellowship among its members, to facilitate the development of leadership skills of Chinese Americans professionals, and to address various issues that Chinese American professionals faced in the workplace.

In order to encourage professional advancement of the members, the ACAP regularly hosts technical seminars and workshops with various professional disciplines throughout the year. The flagship activity is the Science, Engineering and Technology Seminars (SETS) held in Houston in the spring/ summer of each year. SETS usually draw 200 to 300 participants. These seminars, workshops and conferences are multidisciplinary, and often involve guest speakers from other states and foreign countries.

THE ASSOCIATION OF CHINESE AMERICAN PROFESSIONALS (ACAP)
10303 Westoffice Drive Box 194, Houston, Texas 77042
<https://www.acap-usa.org>

MEMBERSHIP APPLICATION FORM

Name: Mr./Mrs./Ms./Dr. _____ (Chinese) _____
Last First Middle

Spouse: _____ (Chinese) _____ ACAP Member: _____ Yes _____ No

Mailing Address: _____ Home or _____ Business _____

Phone: Home _____ Work _____ Fax: Home _____ Work _____

E-mail: Home _____ Work _____

Education:	Degree	University/Institute	Major Field
	_____	_____	_____
	_____	_____	_____

Currently enrolled at (University): _____ Expected Degree/Date: _____

Employer: _____

Other Chinese Society Membership: _____

Division Preference (Please Check):

<input type="checkbox"/> Architecture Engineering	<input type="checkbox"/> Education	<input type="checkbox"/> Law	<input type="checkbox"/> Polymer symposium
<input type="checkbox"/> Biomedical Science	<input type="checkbox"/> Electrical Engineering	<input type="checkbox"/> Literature and Art	<input type="checkbox"/> Political Science
<input type="checkbox"/> Business	<input type="checkbox"/> Environmental	<input type="checkbox"/> Mechanical Engineering	<input type="checkbox"/> Social Science
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☐ Life Member - \$200 (one-time payment)
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Science and Technology Division, Taipei Economic & Cultural Office in Houston

The Science and Technology Division of the Taipei Economic and Cultural Office in Houston is the office of the National Science and Technology Council (NSTC) of Taiwan in the central U.S. We facilitate collaboration in research, development and innovation between Taiwan and the central U.S.

Mission:

1. Promote collaboration in science and technology between Taiwan and the central U.S.
2. Help bidirectional exchanges, recruitments, and visits of young talents in science and technology fields between Taiwan and the central U.S.
3. Help arrange bidirectional visits of experts in science and technology between Taiwan and the central U.S.
4. Encourage investments to Science Parks in Taiwan.
5. Help talents in the central U.S. organize science and technology conferences based on the future development of science and technology in Taiwan.
6. Help promote science and technology developments in Taiwan to the central U.S.

Service Area:

Arkansas, Illinois, Iowa, Louisiana, Minnesota, Mississippi, Missouri, Oklahoma, Texas, and Wisconsin

Contact Information:

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駐休士頓辦事處科技組

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